thickened arista, but the fourth vein is complete, there are 2–3 weak pteropleural bristles as in *B. busckii,* and the femora and tibiae have short, weak bristles. The African genus *Bequaertiana* Curran (1929, Amer. Mus. Novitates 340: 14) is another in the same tribe. It has an incomplete fourth vein as in *Bezzimyia,* and a wide male front, but it has peculiar characters of its own such as plumose arista and setose first vein. As in *Bezzimyia americana,* I see no evidence of pteropleural bristles in the sole example of *Bequaertiana* before me, and none are mentioned in the available descriptions. *Trypetidomima* Townsend (1935, Revista Ent. 5: 68) from Brazil can also be referred to this tribe.

NEW SPECIES OF HYDROPTILIDAE (TRICHOPTERA)[1]

By R. L. Blickle, Durham, New Hampshire

Five new species of Hydroptilidae were encountered in a recent survey of light trap material from the State of Maine. The material was furnished through the kindness of Dr. A. E. Brower. The survey covered a six week period during July and August, 1959. Most localities were from the Boreal region.

Holotypes and paratypes will be placed in the Illinois Natural History Survey Collection and paratypes will be retained in the collection of the University of New Hampshire.

Hydroptila jackmanni, n. sp.

Male.—Length from front of head to tip of wings 2.5–3.0 mm. Seventh sternite with a short, pointed apico-mesal process. Eighth segment is covered with long hairs on apical one-fourth. Genitalia as in Fig. 1. Lateral view, Fig. 1A, has been drawn with the terminal segments protruding to better illustrate the genitalia. Claspers, in lateral view, are C-shaped; upper arm of clasper wider than lower; a small, black protuberance at apical one-third of the ventral

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surface of upper arm. Ventral view, Fig. 1C, the tips of the lower arms meet on the meson and form a "V" when seen in this view; upper arms flare out, the tips are further apart than the base. From a posterior view the upper arms of the clasper are inclined at an angle of forty-five degrees, the mesal edge being lower than the ectal edge. Tenth tergite, Fig. 1A, tapers irregularly from base to apex; lateral edges are sclerotized to a greater degree than rest of tergite; a narrow ridge extends down the dorsum; area between the dorsal ridge and lateral edges irregularly concave. Subgenital plate broadly triangular with two setae near apex, Fig. 1C.

Aedeagus, Fig. 1B, 0.4 mm. long; basal and apical parts are of equal length; a small spiral process occurs between apical and basal parts; tip of aedeagus appears forked in some views.

This species is quite distinct from the other members of the genus.

Holotype Male.—Dennistown, Maine, 19 July 1959.

Paratype Males.—Dennistown, Maine, 14–31 July 1959, 100 specimens.

Other records.—Allagash, Maine, 5–29 July 1959, 3 specimens; Dennistown, Maine, 14–31 July 1959, 3,674 specimens; Oquossoc, Maine, 19 July–4 Aug. 1959, 35 specimens; Colebrook, New Hampshire, 25 June–29 July 1957, 28 specimens.

Hydroptila broweri, n. sp.

Male.—Length from front of head to tip of wings 2.2–2.8 mm. Seventh sternite with a short, pointed apico-mesal process. Eighth segment with numerous, long, heavy hairs on the apical sixth, these hairs concealing the genitalia; eighth segment with a pigmented area on dorsum indicated by a single dotted line, Fig. 2A. Genitalia, Fig. 2, in lateral view, the claspers are widest at base; however, the rounded apex is slightly wider than the main body of the clasper; a dark protuberance occurs at the apical seventh on the ectal surface. Ventral aspect, Fig. 2C, claspers appear broad, small hairs cover the lateral and ventral surfaces of the claspers. Tenth tergite is composed of one central and two lateral parts; the central part is large and extends nearly one-half again beyond the apex of the claspers; the central portion appears upcurved at apex; lateral parts of tenth tergite extend to just beyond the claspers; apex of lateral parts appear truncate and pigmented in Fig. 2A. Ventral aspect, the lateral arms are excavated at the apex and the ectal margins are pointed. Subgenital plate is triangular with two setae near the apex.

Aedeagus, Fig. 2B, 1.0 mm. long; in most specimens the apical

part is bent to one side; the base is very long, over twice the length of apical part; tip of aedeagus curved, a tubular structure extends beyond tip. The very long aedeagus is quite apparent in cleared and uncleared specimens.

This species is similar to *H. scolops* Ross. However, the very long aedeagus, the parts of tenth tergite being shaped differently, and the tooth on the clasper occurring before the apico-lateral edge, serve to distinguish *broweri*.

Holotype Male.—Allagash, Maine, 26 July 1959.

Paratype Males.—Allagash, Maine, 22 July–2 Aug. 1959, 53 specimens; Dennistown, Maine, 14–25 July 1959, 21 specimens; Oxbow, Maine (T9 R5), 19 July–4 Aug. 1959, 4 specimens; Oquossoc, Maine, 17–31 July 1959, 20 specimens; Tramway, Maine, 3 Aug. 1959, 1 specimen; Colebrook, New Hampshire, 5–29 July 1957, 5 specimens.

Hydroptila fiskei, n. sp.

Male.—Length from front of head to tip of wings 2.6–3.0 mm. Seventh sternite with a very long apico-mesal process. Genitalia, Fig. 3. Claspers are short, curved downward at apex; ventrally, Fig. 3C, claspers are approximate on the meson from base to apex. Tenth tergite widest at base, Fig. 3D, and tapers gradually to rounded apex; apex appearing slightly bilobed; in lateral view the slope of the tenth tergite is straight from base to apex, however, in some specimens the apical one-seventh is at a flatter angle than the basal part of the tergite.

Aedeagus, 0.8 mm. long, Fig. 3B. Apical part sharply bent at tip; a long slender tubular structure extending to tip or slightly beyond; a short slender structure near base of apical part; the spiral process is short, apparently making no more than one revolution around aedeagus.

This species is closely related to *H. hamata* Morton and *H. ampoda* Ross. It is distinguished from the above two species by the following. In *hamata* the tenth tergite is concave in profile, and in dorsal aspect is widest at the middle; the tip of the claspers do not meet on the meson. In *ampoda* the tenth tergite is concave in profile, the aedeagus has an entwined spiral process, and the tip of the aedeagus is not bent at an angle.

Holotype Male.—Dennistown, Maine, 17 July 1959.

Paratype Males.—Allagash, Maine, 29 July–2 Aug. 1959, 13 specimens; Dennistown, Maine, 15–28 July 1959, 33 specimens; Oquossoc, Maine, 17 July–4 Aug. 1959, 4 specimens; Oxbow (T9 R5), Maine, 4 Aug. 1959, 2 specimens.

Oxyethira allagashensis, n. sp.

Male.—Length from front of head to apex of wings 2.5–3.0 mm. Seventh sternite with a short apico-mesal process. Genitalia, Fig. 4; claspers short, pointed with apex pigmented and upcurved in lateral view, Fig. 4A. The appearance of the claspers and subgenital plate, lateral aspect, gives the effect of pincers. In Fig. 4C, the claspers are pointed towards the meson and the subgenital plate appears as an ovate plate.

Aedeagus, 0.5 mm. long; tip of aedeagus appears membranous; the spiral process in most specimens makes at least two complete revolutions around the apical part and extends beyond the apex of the aedeagus; the revolutions of the spiral process may be separated as drawn, Fig. 4B, or the turns of the process may be appressed together.

This species is related to *O. rivicola* Blickle & Morse but lacks the heavy spine on the apico-lateral margin of the eighth segment. The subgenital plate is not indented as it is in *rivicola.*

Holotype Male.—Allagash, Maine, 29 July 1959.

Paratype Males.—Allagash, Maine, 24 July–2 Aug. 1959, 23 specimens; Oquossoc, Maine, 28 July 1959, 1 specimen.

Ochrotrichia wojcickyi, n. sp.

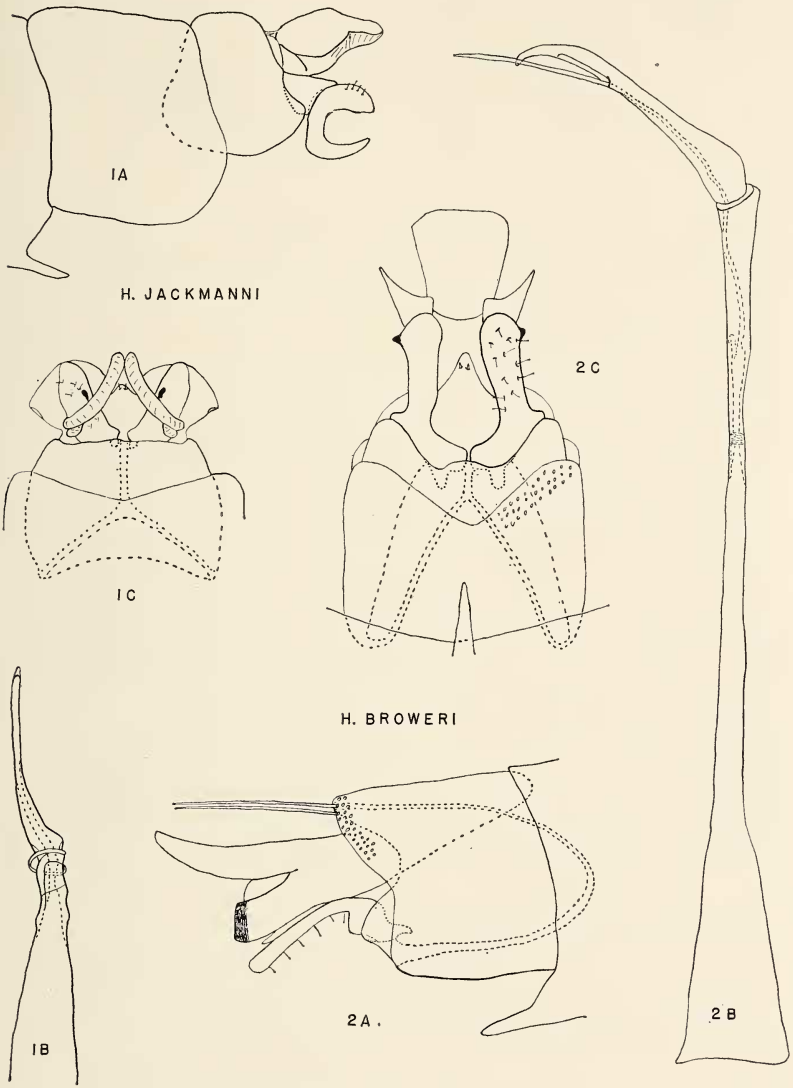
Male.—Length from front of head to apex of wings 2.6–3.0 mm. Genitalia, Fig. 5. Tenth tergite, apical portion divided into sclerotized rods. Dorsal view, Fig. 5D, rod A is hooked at apex; rod B is quite short, broad at base, and pointed at the apex; rod C is long and tapers to an acute point; the bases of A, B, and C arise from approximately the same area; rod D appears short but in lateral aspect, Fig. 5A, it is long and down-curving; rod E is long and pointed, its base approximate with D. Claspers are nearly symmetrical with pointed, toothed apex and notched mesally; with a variable number of teeth near the notched area and several teeth between notch and apex.

This species is closely related to *O. lometa* Ross and *O. logana* Ross, being quite similar in the shape and number of sclerotized rods and the shape of the claspers. However, the above two species were described from New Mexico and Utah, respectively.

Holotype Male.—Dennistown, Maine, 25 July 1959.

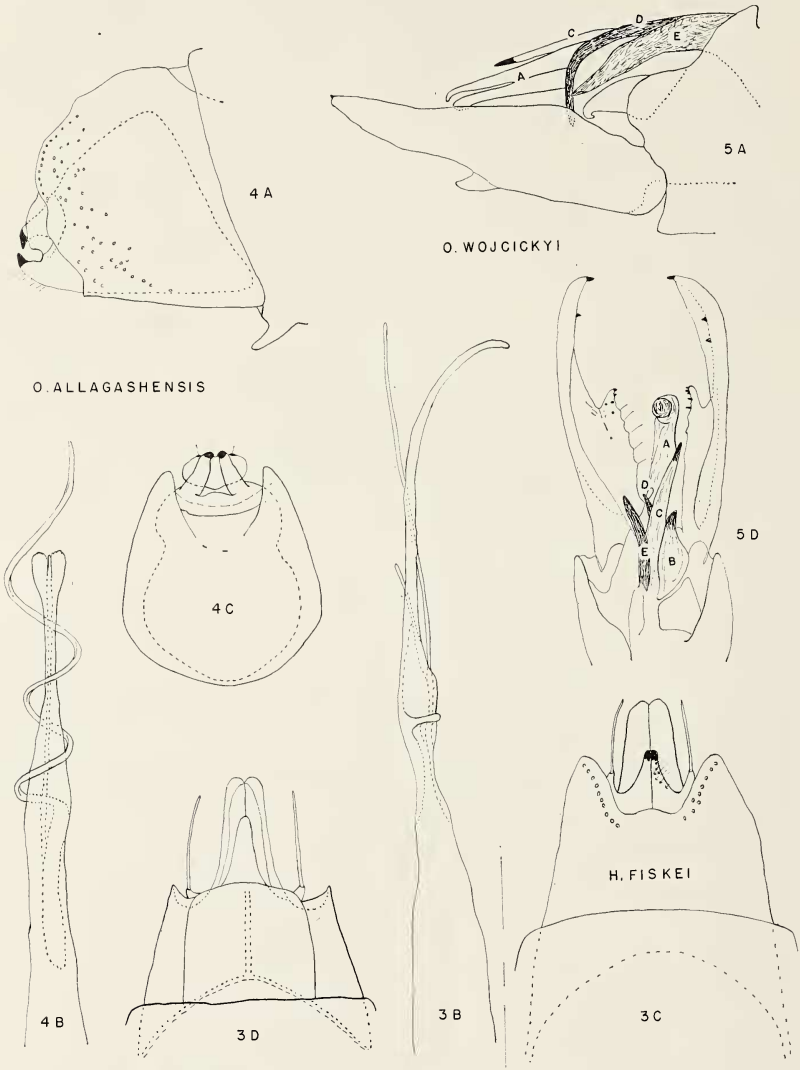
Paratype Males.—Dennistown, Maine, 24–31 July 1959, 8 specimens; Oquossoc, Maine, 28 July 1959, 1 specimen.

BLICKLE PLATE I



Hydroptila male genitalia. A, lateral. B, aedeagus. C, ventral. D, dorsal.

BLICKLE PLATE II



Hydroptila, Ochrotrichia, and *Oxyethira* male genitalia.